

Listing of Claims:

1. (Currently Amended) A radar oscillator comprising:
an oscillation unit ~~having~~ comprising: (i) an amplifier,
(ii) an LC resonator which is connected to the amplifier, has at
least an inductance component and a capacitance component, and
5 resonates at a predetermined resonant frequency, and (iii) a
feedback circuit which performs positive feedback from an output
side of the amplifier to an input side of the amplifier, the
oscillation unit outputting an oscillation signal having a
frequency determined by the resonant frequency of the LC
10 resonator;

a first switch circuit which is connected to a power supply
unit and to the amplifier of the oscillation unit, and which
turns off an electric power supply by the power supply unit to
the amplifier in a period in which a pulse signal representing a
15 transmitting period for transmitting the oscillation signal as a
transmitting radar signal is not input to set the oscillation
unit in a non-oscillation state, and ~~which~~ turns on the electric
power supply by the power supply unit to the amplifier in a
period in which the pulse signal is input to set the oscillation
20 unit in an oscillation state; and

a second switch circuit which is connected to the power
supply unit and to the LC resonator of the oscillation unit, and

which turns on the electric power supply by the power supply unit to the LC resonator in a predetermined period immediately before the pulse signal is input in a period in which the pulse signal is not input to supply a predetermined current to the LC resonator, and ~~which~~ turns off the electric power supply by the power supply unit to the LC resonator at a timing at which the pulse signal is input to stop the supply of the predetermined current to the LC resonator, so that activation of an oscillation operation of the oscillation unit is accelerated.

2. (Original) The radar oscillator according to claim 1, wherein the LC resonator is formed by a parallel resonant circuit constituted by a coil and a capacitor.

3. (Original) The radar oscillator according to claim 2, wherein the coil has an intermediate tap, and a buffer connected to the intermediate tap of the coil is arranged in the feedback circuit.

4. (Original) The radar oscillator according to claim 1, wherein the LC resonator is formed by a $\lambda/4$ transmission path.

5. (Currently Amended) The radar oscillator according to claim 1, wherein:

the LC resonator includes first and second LC resonators
formed by parallel resonant circuits, respectively, each of the
5 parallel resonant circuits being constituted by a coil and a
capacitor, coils and capacitors, respectively,

the amplifier includes a first transistor connected from a
collector thereof to the first LC resonator, ~~and~~

the feedback circuit includes a second transistor connected
10 from a collector thereof to the second LC resonator,

a signal output from the collector of the first transistor
or the first LC resonator is received by a base of the second
transistor, and

a signal output from the collector of the second transistor
15 or the second LC resonator is input to a base of the first
transistor.

6. (Original) The radar oscillator according to claim 5,
wherein the coils of the first and second LC resonators have
intermediate taps, respectively, and first and second buffers
connected between the intermediate taps of the coils and the
5 bases of the first and second transistors, respectively, are
arranged in the feedback circuit.

7. (Original) The radar oscillator according to claim 5, wherein the first and second LC resonators are formed by $\lambda/4$ transmission paths, respectively.

8. (Currently Amended) The radar oscillator according to claim 5, comprising a third switch circuit which connects between output terminals of the first and second LC resonators to each other until a predetermined period has elapsed after inputting of the pulse signal is stopped, thereby accelerating convergence of the oscillation signal.

9. (Currently Amended) The radar oscillator according to claim 6, comprising a third switch circuit which connects between output terminals of the first and second LC resonators to each other until a predetermined period has elapsed after inputting of the pulse signal is stopped, thereby accelerating convergence of the oscillation signal.

10. (Currently Amended) The radar oscillator according to claim 7, comprising a third switch circuit which connects between output terminals of the first and second LC resonators to each other until a predetermined period has elapsed after inputting of the pulse signal is stopped, thereby accelerating convergence of the oscillation signal.